



Presentation to

#### Tomorrow's Energy Today

Steve Taber Chairman & CEO Nordic Windpower 25 October 2006

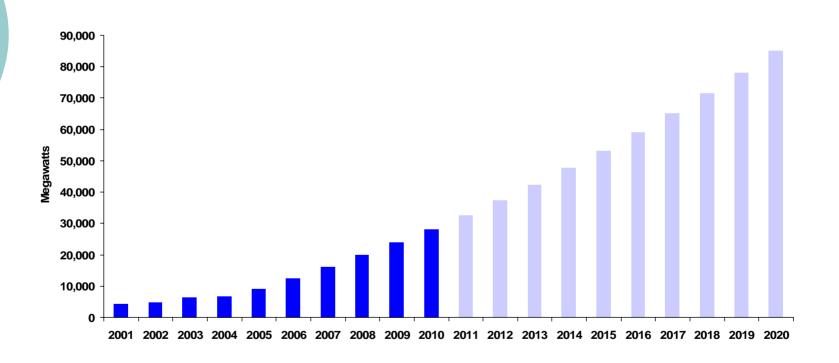


#### **Business Position**

- Large & Growing Market
  - Growing 25% per year since 1990
- Experienced Management Team
- Proven, Reliable Technology
  - Inherent cost advantage of 5% to 30%
- Highly capital-efficient business model
  - Final assembly & test
    - All component manufacturing outsourced
  - Just-in-time no parts or product inventory
  - No receivables issues



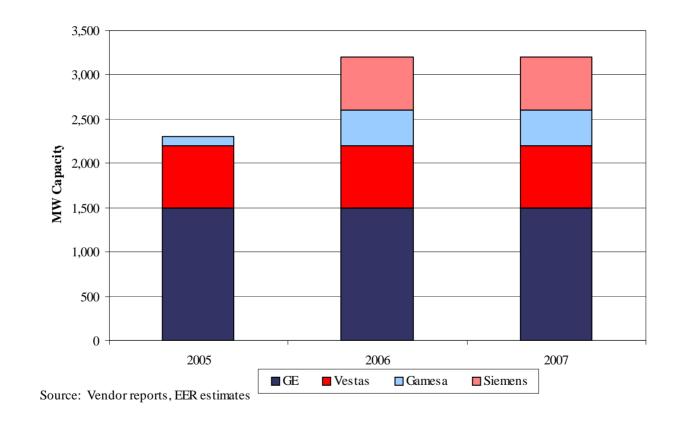
#### Windpower experiencing explosive growth worldwide



\$ 1/2 trillion will be invested in the US by 2020



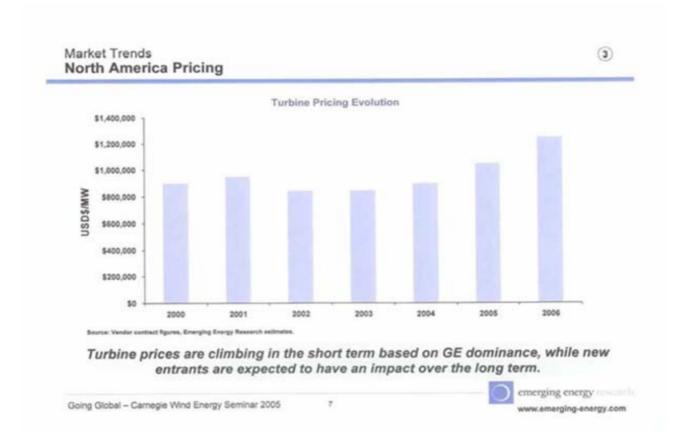
#### Market Opportunity: Supply Shortfall



Supply shortfall of ~1,000 MW per year



#### Market Opportunity: Turbine Pricing



Prevailing market prices are rising steeply, widening Nordic's advantage as low cost producer



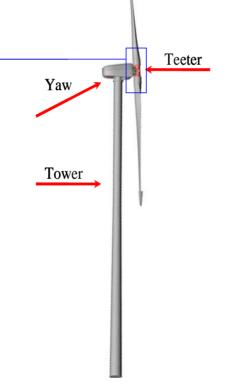
#### The Nordic Philosophy: Simple, Reliable, Very Cost Competitive





#### The Nordic 1000





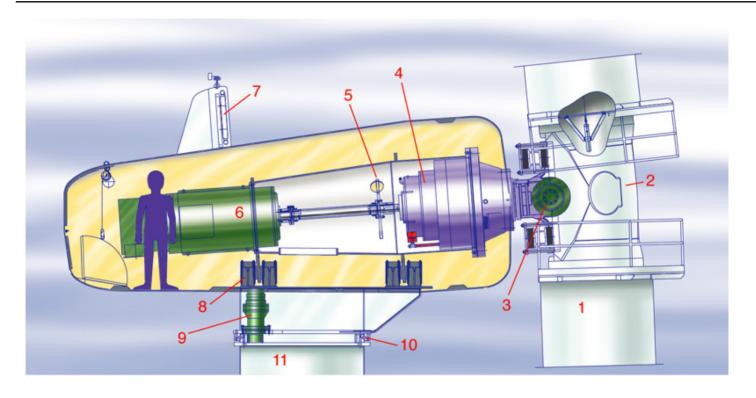


The "Danish Topology" rigid & massive

The Nordic "flexible design" lightweight & elegant



#### The Nordic 1000



- 1. Blade 2. Hub 3. Teeter bearing 4. Gearbox 5. Disc brake 6. Generator 7. Cooler
- 8. Vibration isolators 9. Yaw drive 10. Yaw bearing 11. Tower

An uncomplicated design with less components enables a long and reliable operation. The roomy interior of the nacelle facilitates the maintenance of the turbine.



#### Competitive Advantage: Manufacturing & Installation

- Blades fewer and lighter
- Nacelle lighter
- Tower lighter
- Foundation smaller
- Assemble nacelle and hub on the ground
- Two tower sections, not three
- Three crane picks, not five



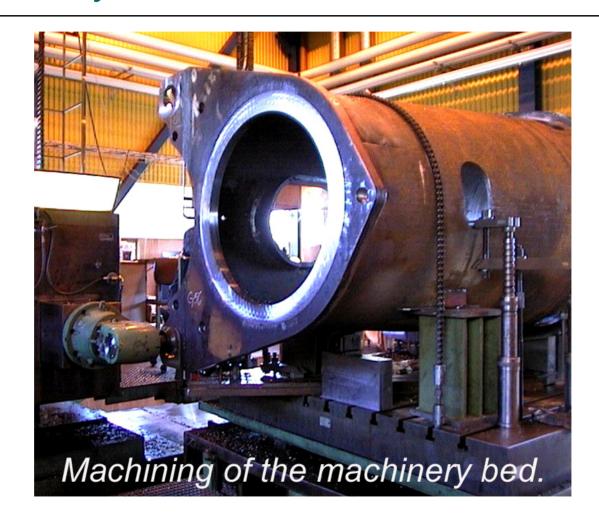
# Competitive Advantage: Reliability & Maintenance

- In Sweden, over 100,000 hours of troublefree operation – over 98% availability
- No component failures
- Simple maintenance under \$5,000 per year
- Current Nordic turbines hold the world record for hours of operation and power produced













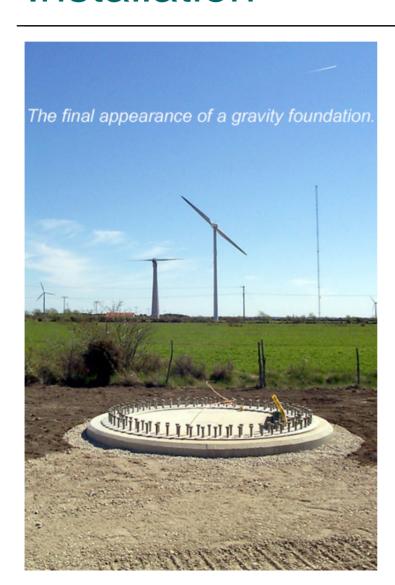






































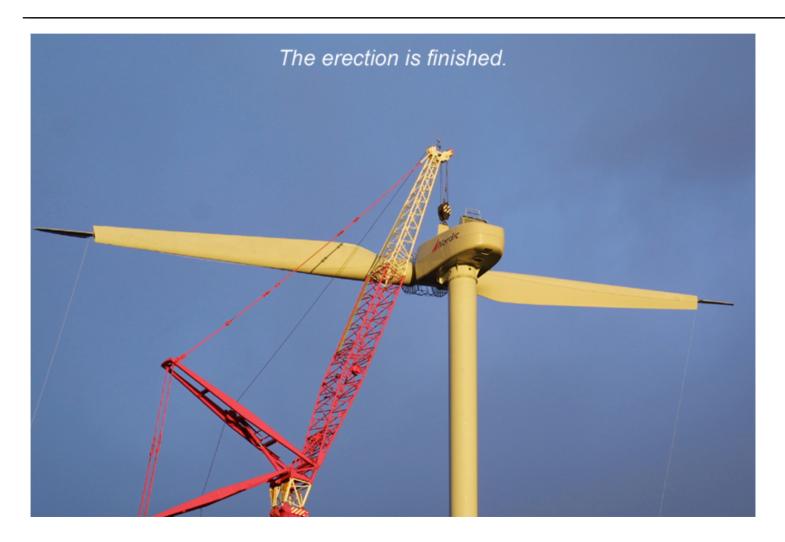














# Assembly platform

#### Factory floor

- Floor area minimum 5,000 m² (50,000 ft²)
- Floor loading 20 tonnes/m² (2 tons/ft²)
- Plus outdoor staging

#### Crane

- Two cranes minimum
- Crane capacity 60 tonnes
- Crane lifting height 10m (34 ft)



#### Supply Chain (European partners)



gearboxes



yaw gears

Kristiansand Jernstoberi

hub



controls



blades



Long-term co-operation with well-known suppliers



# Opportunity for a Strategic Partner

- Wind market is growing very rapidly, with no end in sight
- Market timing is excellent
- Technology is proven and strongly competitive
- No assembly facilities or location have been established



# Opportunity for a Strategic Partner

- The Nordic team is very strong in renewable energy but inexperienced in manufacturing
- We seek a partner who can bring complementary strengths
  - Just-in-time assembly
  - Supply Chain management
  - Financial depth
  - Proven performance



# Challenges for a Strategic Partner

- Assembly is not difficult
- Managing the Supply Chain is the key challenge
- Delivery time is often inflexible
- Warranty exposure is significant
  - Timely delivery
  - Power curve and availability
  - Serial defects



## Opportunity for a Strategic Partner

- Low cost of market entry
  - A rare business opportunity to enter a capitalintensive industry with a highly capital-efficient business model
  - No R&D no complex tooling no flooring
- Excellent market timing
  - Rising prices
  - Industry backlogged 2 years
  - Strong growth for the next decade and more



#### Outstanding opportunity to build value

- European markets have placed very high valuations on wind turbine manufacturers
- London market has supported IPOs of wind turbine manufacturers, some pre-revenue
- Current market valuations:

Suzlon \$8 billion Gamesa \$4 billion Clipper \$600 million

- Significant acquisition interest
  - Recent acquisitions by GE, Siemens, Vestas, Goldman-Sachs, AES, EdF, (Shell? Cat?)





#### Steve Taber

Chairman & CEO

toll free: 888 322 2080 tel: +1 415 457 1848

m: +1 415 250 0585

fax: +1 775 201 8500

staber@nordicwindpower.com